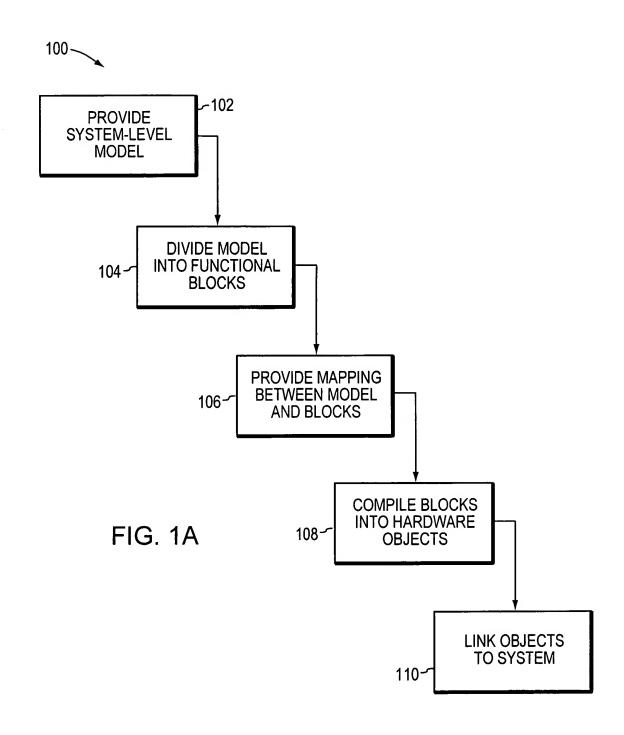Title: System-Level Simulation of Devices Having
Diverse Timing
Inventors: Bellantoni et al.
Atty Docket No.: CDS-006
Application Serial No.: 10/820,435
Express Mail Mailing Label No. EV334240618US
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100

```
┌─────────────────┐
│    PROVIDE      │─── 102
│  SYSTEM-LEVEL   │
│     MODEL       │
└─────────────────┘
         │
         ▼
┌─────────────────┐
│  DIVIDE MODEL   │
104 ──│ INTO FUNCTIONAL │
│     BLOCKS      │
└─────────────────┘
         │
         ▼
┌─────────────────┐
│ PROVIDE MAPPING │
106 ──│ BETWEEN MODEL   │
│   AND BLOCKS    │
└─────────────────┘
         │
         ▼
┌─────────────────┐
│ COMPILE BLOCKS  │
108 ──│ INTO HARDWARE   │
│    OBJECTS      │
└─────────────────┘
         │
         ▼
┌─────────────────┐
│  LINK OBJECTS   │
│   TO SYSTEM     │
110 ──│                 │
└─────────────────┘
```

FIG. 1A

Title: System-Level Simulation of Devices Having
Diverse Timing
Bellantoni *et al.*
Atty Docket No.: CDS-006
Application Serial No.: 10/820,435
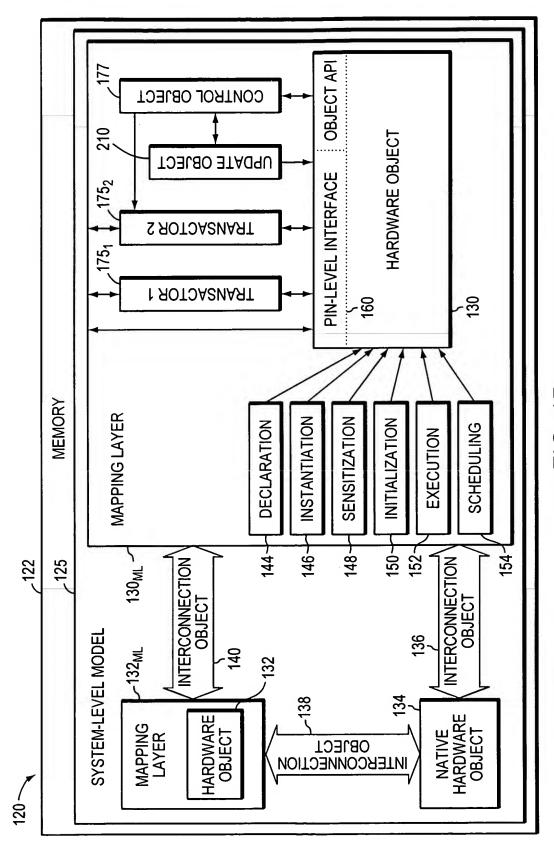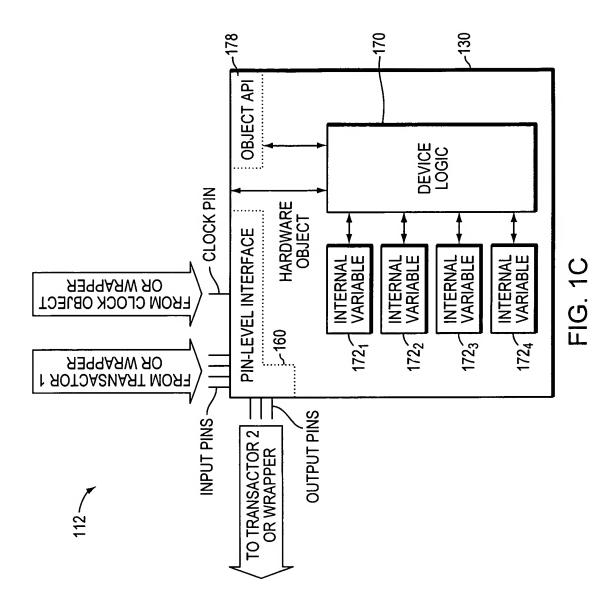Express Mail Mailing Label No. EV334240618US
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FIG. 1B

Title: System-Level Simulation of Devices Having
Diverse Timing
Inventors: Bellantoni et al.
Atty Docket No.: CDS-006
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FIG. 1C

Title: System-Level Simulation of Devices Having
Diverse Timing
Inventors: Bellantoni *et al.*
Atty Docket No.: CDS-006
Application Serial No.: 10/820,435
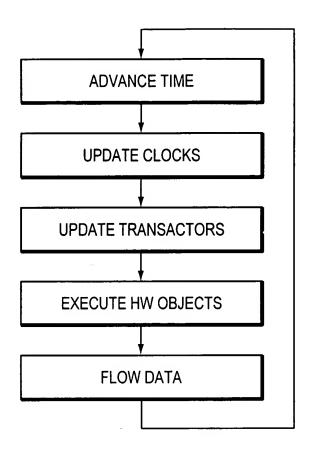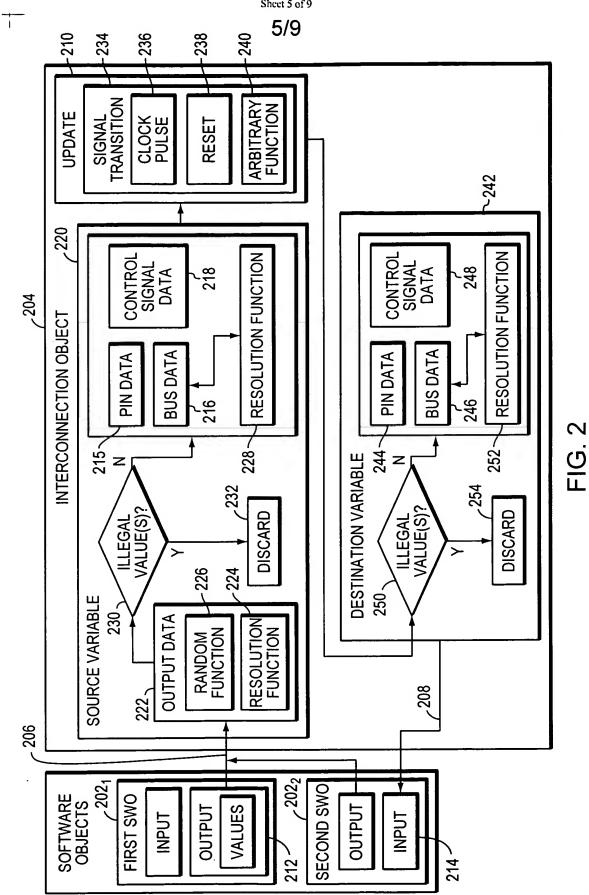Express Mail Mailing Label No. EV334240618US
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```
         ┌──────────────────────┐
         │     ADVANCE TIME     │
         └──────────────────────┘
                    │
         ┌──────────────────────┐
         │    UPDATE CLOCKS     │
         └──────────────────────┘
                    │
         ┌──────────────────────┐
         │  UPDATE TRANSACTORS  │
         └──────────────────────┘
                    │
         ┌──────────────────────┐
         │  EXECUTE HW OBJECTS  │
         └──────────────────────┘
                    │
         ┌──────────────────────┐
         │      FLOW DATA       │
         └──────────────────────┘
```

FIG. 1D

Title: System-Level Simulation of Devices Having
Diverse Timing
Inventors: Bellantoni et al.
Atty Docket No.: CDS-006
Application Serial No.: 10/820,435
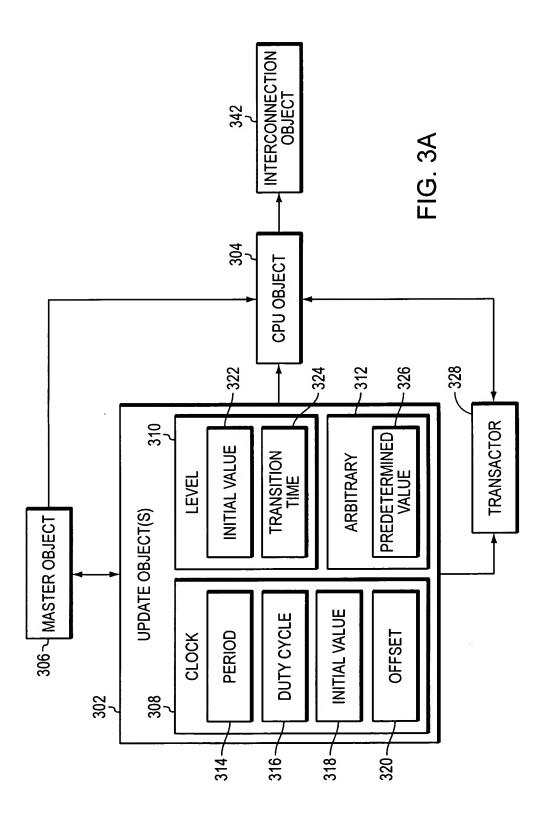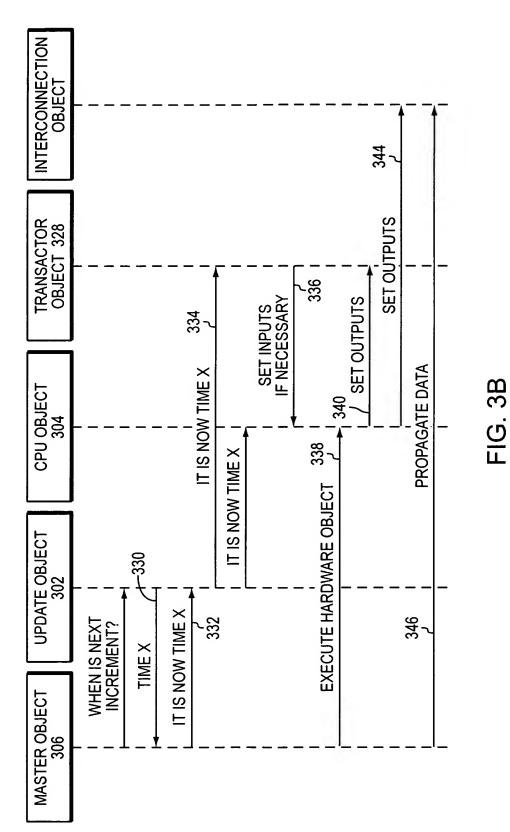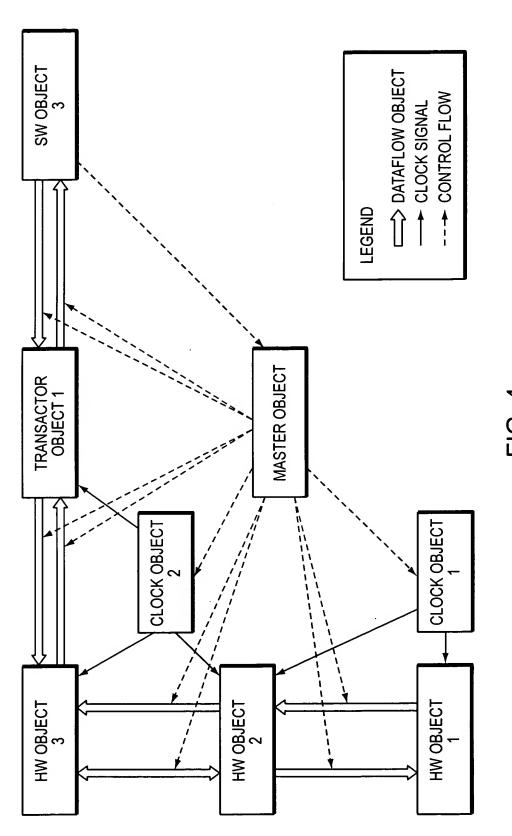Express Mail Mailing Label No. EV334240618US
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FIG. 2

Title: System-Level Simulation of Devices Having
Diverse Timing
Inventors: Bellantoni et al.
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FIG. 3A

Title: System-Level Simulation of Devices Having
Diverse Timing
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FIG. 3B

Title: System-Level Simulation of Devices Having
Diverse Timing
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FIG. 4

LEGEND

⇒ DATAFLOW OBJECT
→ CLOCK SIGNAL
--→ CONTROL FLOW

SW OBJECT 3

TRANSACTOR OBJECT 1

MASTER OBJECT

CLOCK OBJECT 2

CLOCK OBJECT 1

HW OBJECT 3

HW OBJECT 2

HW OBJECT 1

Title: System-Level Simulation of Devices Having
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Atty Docket No.: CDS-006
Application Serial No.: 10/820,435
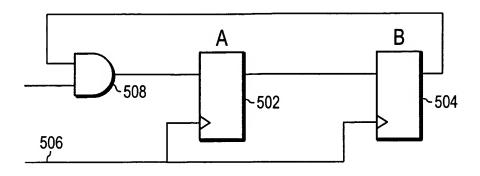Express Mail Mailing Label No. EV334240618US
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FIG. 5